

TITLE: DISPLAY FRAME ALLOWING CHANGING OBJECTS
SHOWN THEREIN

BACKGROUND OF THE INVENTION

1. Field of the invention

- 5 The present invention is related to a display shadow box allowing the easy displaying of objects (collectibles, art works etc..) shown therein, and especially to a display frame with a rear open able box which has a display shelf for placing and displaying objects and floodlights. Objects displayed therein the frame can be changed easily.
- 10 The frame is applicable to displaying various commodities, collectibles, art works, jewelry, and souvenirs.

2. Description of the Prior Art

- People are fond of beautiful and fine things. Displaying of art works with esthetic or memorial values may call forth appreciation of viewers,
- 15 and if the displayed objects with monetary values, the displaying in the exhibitions can arouse the purchasing desires of the viewers.

- The plain paintings generally are provided for appreciation of people after being mounted and framed, while the three-dimensional artworks are displayed generally in two forms: one is to directly display
- 20 them on tables or in show cases, this is suitable for larger objects; the other is to hang them on the walls as wall decorations, this is suitable for small or medium sized objects. Such as is shown in Fig. 6, it is a way of displaying of a wall decoration. The drawing shows a plane frame A, and some shells B, the latter ones are desired to be displayed
- 25 and are fixed one by one on the front surface of the plane frame A. This

form is normally used. It can acquire the effect of displaying, but still has the following defects:

1. When an object to be displayed is fixed in a plane frame, it is positioned, if there is a different object to be displayed, changing is required for the two objects at any time between the period of displaying. This form of displaying has less flexibility.
2. In displaying an abovementioned wall decoration, laying out of external lights which can generate shadows is often required to increase visual beauty of the decoration, this not only needs extraordinary laying-out work of the external lights, but the positions of the lights are also supposed to be changed frequently in pursuance of objects to be displayed when in doing different laying-out works for different displaying. Thus, manpower and time will be used in quite a wasteful mode.

In view of the above defects to be overcome, a need is for a display frame allowing changing of an object shown therein. The display frame not only renders such changing to be made easily, but also provides an effect of light illuminating; and the inventor thus provides the present invention after continuous study, improvement and development.

SUMMARY OF THE INVENTION

The primary object of the present invention is to provide a display frame (or open able and lighted shadow box) that is provided with an open able box for placing therein an object to be displayed, with the structure allowing opening and closing of the box at the rear of the frame, the objects to be displayed in the box can be changed easily.

The secondary object of the present invention is to provide a display frame of which the box is provided therein on at least one side thereof with light sources for irradiating light on an object to get an effect of displaying.

5 The third object of the present invention is to provide a display frame that is provided therein with a sensor able to detect movements and sense whether a person is getting close to the frame. When a person is getting close to the frame, it renders the light sources to emit light automatically; and when the person leaves, the light sources are turned
10 off automatically after a period of approx 20 seconds.

The fourth object of the present invention is to provide a display frame that has a three-sections switch which can render the light sources keep turning on/off, and or can control the turning on/off of the sensor, thereby the light sources in the box can be controlled as required.

15 To achieve the above stated objects, the display frame allowing changing of an object shown therein provided by the present invention comprises an outer frame part, an inner frame part and a box. The outer frame member (or "part") can be separately mounted on the external periphery of the inner frame member, the box is connected to the rear
20 side of the inner frame member and is open able and closable, the inner frame member is provided with a window, the box has an opening on the front side thereof, the opening is communicated with the window of the inner frame member. The box can place therein an object to be displayed, the box is provided therein on at least one side thereof with light
25 sources for irradiating lights on the object displayed.

The present invention will be apparent after reading the detailed description of the preferred embodiment thereof in reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

5 Fig. 1 is a perspective view of an embodiment of the present invention;

 Fig. 2 is an analytic perspective view of the embodiment of the present invention;

 Fig. 3 is a perspective view showing the appearance of an inner
10 frame member of the present invention;

 Fig. 4 is a schematic view showing the embodiment of the present invention with light sources therein;

 Fig. 5 is a schematic view showing the embodiment of the present invention with different light sources therein;

15 Fig. 5a is a sectional view taken from a section line a-a' from Fig. 5;

 Fig. 6 is a perspective view showing the appearance of a conventional wall decoration.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

20 Referring firstly to Figs. 1-3 showing a preferred embodiment of a display frame 1 allowing changing of an object shown therein of the present invention, the display frame comprises an inner frame member 2, an outer frame member 3 and a box 4. The inner frame member 2 and the box 4 form an inner housing 10 of the display frame 1; the outer
25 frame member 3 is mounted on the external periphery of the inner

housing 10.

The inner frame member 2 is a rectangular plate frame, the frame body 21 thereof is provided with an opened window 22. The frame body 21 is provided therein with a sensor 23 able to sense whether a human
5 body is getting close to the display frame 1. Referring to Fig. 3, the inner frame member 2 is provided with a window frame 25 framing the window 22 on the rear side 24 thereof. The window frame 25 has pivot bolts 26 on one lateral side and has metal blocks 27 on the other lateral side thereof. The inner frame member 2 is further provided with a power
10 supply 28 and a switch 29 on the rear side 24 thereof. The power supply 28 can use direct current (such as batteries) or alternate current.

Referring to Fig. 2, the outer frame member 3 is mounted on the external periphery of the inner frame member 2, and frames a glass shield 31 on the front end of the inner frame member 2, the form and
15 fashion of the outer frame member 3 can be changed according to user's fondness, for a different outer frame member 3 can give a different visual effect.

The box 4 is a rectangular body, it is connected to the window frame 25 on the rear side 24 of the inner frame member 2, the box 4 has
20 an opening 41 on its front side to communicate with the window 22 of the inner frame member 2. The box 4 is provided therein with a display shelf 43 made of transparent material, the display shelf 43 can afford placing thereon of an object 42 of 0.5-4 pounds to be displayed (as shown in Fig. 4). The box 4 has light sources 44 at least on one side
25 thereof for irradiating light on the object 42 to be displayed. The light

sources 44 can be LED's or common lamp bulbs; the light sources 44 are controlled by the switch 29 to switch among three modes including turning on, turning off and switching to be controlled by the sensor 23. When the switch 29 is moved to allow control of the sensor 23, if a
5 person is getting close to or stands at a distance 4inchs -3 feet from the display frame 1, the light sources 44 will emit light automatically, and if the person has left the display frame 1, in several seconds, the light sources 44 will be turned off automatically.

The box 4 is provided with pivot bearings 45 on one lateral side
10 thereof to be pivotally connected with the pivot bolts 26 to allow rotating of the box 4 for opening or closing; the box 4 is provided on the other lateral side thereof with magnets 46, so that when it is closed, the magnets 46 can attract the metal blocks 27 on the other lateral side of the window frame 25. By virtue of easy opening and closing of the box
15 4, the display frame 1 can allow changing the display of different object 42 easily.

Referring to Figs. 4 and 5, the light sources 44 in the box 4 can be provided on the upper and the lower sides of the box 4, because that the display shelf 43 is made of transparent material, light beams can be
20 irradiated on the object 42 to be displayed to generate beautiful shadows. The light sources 44 also can be provided on the right and the left sides of the box 4 (as shown in Fig. 5), when the positions of the light sources 44 are changed, a different visual effect can be got. The transparent display shelf 43 in the box 4 can be omitted, and instead, a bottom plate
25 47 of the box 4 can be even by height with the window 22 of the inner

frame member 2, thereby the object 42 to be displayed can be placed on the bottom plate 47 of the box 4 directly to also get an effect of displaying (as shown in Fig. 5a).

The present invention thereby has the following advantages:

- 5 1. The box of the present invention is provided with pivot bearings on one lateral side thereof, the inner frame member is provided with pivot bolts in corresponding positions with the pivot bearings; and the box is provided on the other lateral side thereof with magnets, the inner frame member is further provided with metal blocks on the
10 rear side thereof, this structure renders the box to be easily opened or closed, so that different objects can be displayed easily.
2. The box of the present invention is provided therein with a transparent display shelf and light sources provided at different positions, when the light sources irradiate light beams on the object,
15 different shadow effects can be created, the display frame can be arranged at will without arrangement of additional lights.
3. The display frame of the present invention is embedded therein with a sensor to sense whether there is a person getting close to the display frame, in order to automatically turned on and turned off the
20 light sources; this can not only save power source, but also increase fun by changing between brightness and darkness of the light.
4. The three-section switching of the present invention can make turning on and off of the light sources, or control turning on and off of the sensor, it is flexible in light illumination.

25 In conclusion, according to the content stated above, the present

invention can surely achieve its expected objects to provide a display
frame allowing changing of an object shown therein easily and can
obtain an effect of light illumination. Having thus described my
invention that is industrially valuable, what I claim as new and desire to
5 be secured by Letters Patent of the United States are:

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